

Use Attainability Analysis

for

WBID 0937 Walnut Creek

Submitted by
SES, Inc.

to

Missouri Department of Natural Resources
Water Protection Program

Date received: November 14, 2007

Field Data Sheets for Recreation Use Stream Surveys

Data Sheet A - Water Body Identification

I. Water Body Information (For water body being surveyed)

Water Body Name (from USGS 7.5' quad): Walnut Creek			
Missouri Water Body Identification (WBID) Number:		937	
8 digit HUC code:	10290108	County:	Johnson
Upstream Legal Description (from Table H):	T46N	R24W	Sec14
Downstream Legal Description (from Table H):	T48N	R24W	Sec33
Number of sites evaluated:	7		
List all site numbers, listed consequently upstream to downstream: 7, 6, 5, 4, 3, 2, 1			

Site Locations Map(s): Attach a map of the entire segment with assessment sites clearly labeled.
Mark any other items that may be of interest.

II. Facility Information (list all permitted discharges to the water body segment)

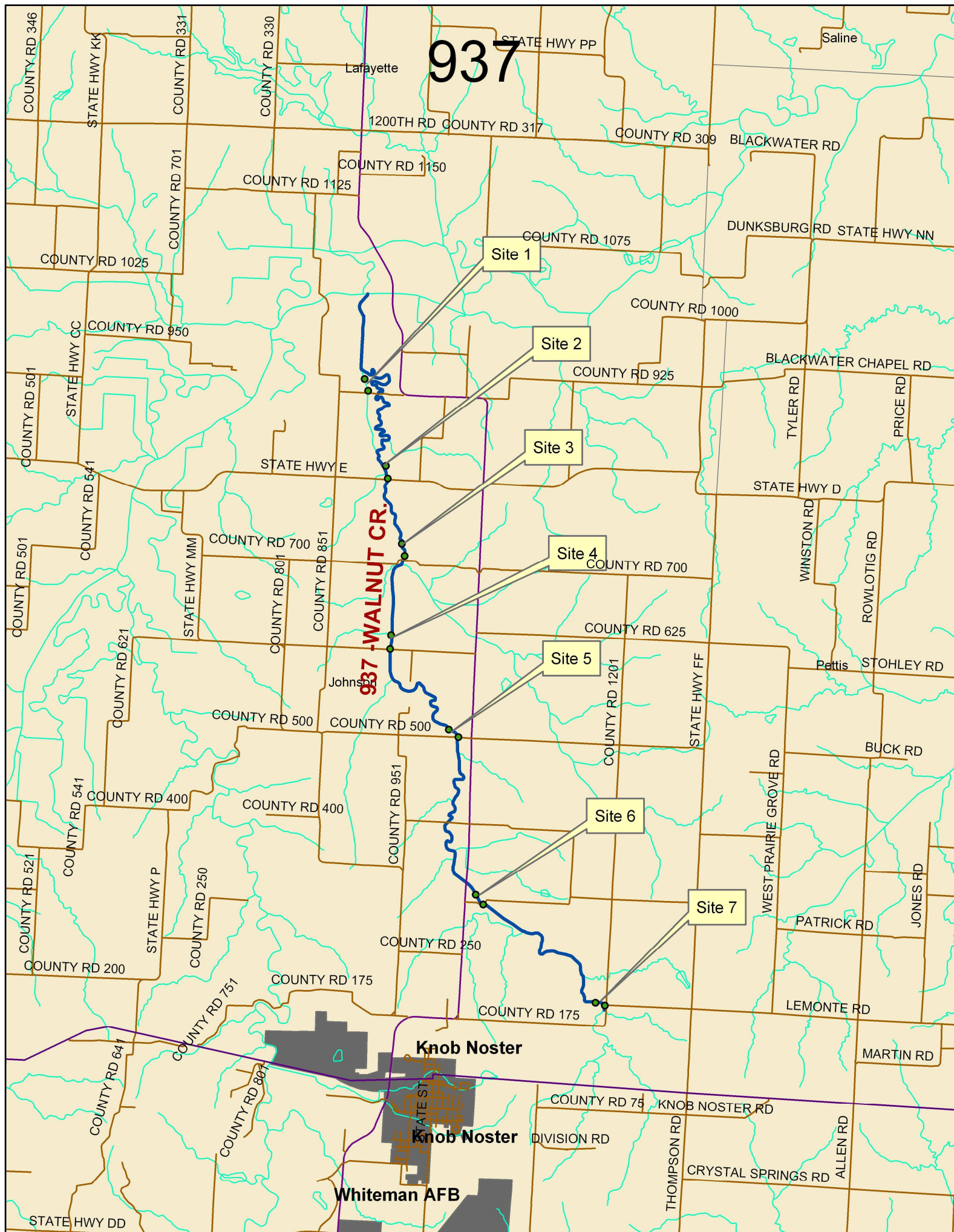
Facility Name(s) and Permit Number(s): Rainbow Acres Subdivision MO0113271
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III. UAA Surveyor (please print legibly)

Name of Surveyor: Gilisa Gould	Telephone Number: 9133070054
Organization/Employer: SES, Inc.	

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Signed: gilisa gould **Date:** 11.02.07



WBID # 937
 Site # 1

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.24.07	17:40	Site Location Description (e.g. road crossing):
Personnel: Larissa Brown and Gilisa Gould		CR 925
Current Weather Conditions: clear		Facility Name: Rainbow Acres Subdivision
Weather conditions for the past 10 days: 4.65 inches		Permit Number: MO0113271
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:		Meters
	0450455	4304358			2.4
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:		Meters
	0450306	4304582			6.0

Photos:

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
71	downstream, T1	72	upstream, T1	73	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
74	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 937
Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	40	20	20	20	

Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 937
Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.24.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>937</u> Site #: <u>1</u> Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0450455</u> UTM Y: <u>4304358</u> +/- <u>2.4</u> (meters) 11 UTM X: <u>0450306</u> UTM Y: <u>4304582</u> +/- <u>6.0</u> (meters) Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Larissa Brown</u> and <u>Gilisa Gould</u>	Dissolved Oxygen Date: <u>10.24.07</u> Time: <u>17:40</u> Dissolved Oxygen: <u>9.4</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>17.7</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.4	0.10	1.0	0.05	0.5	0.30	0.6	0.15	0.7	0.05	0.6	0.15	0.6	0.01	0.7	0.35	0.7	0.40	0.7	0.25	0.2	0.15
2	0.8	0.20	2.0	0.20	1.0	0.55	1.2	0.35	1.4	0.20	1.2	0.20	1.2	0.05	1.4	0.65	1.4	0.70	1.4	0.50	0.4	0.20
3	1.2	0.20	3.0	0.40	1.5	0.65	1.8	0.45	2.1	0.25	1.8	0.15	1.8	0.10	2.1	0.60	2.1	0.70	2.1	0.75	0.6	0.15
4	1.6	0.20	4.0	0.50	2.0	0.65	2.4	0.45	2.8	0.20	2.4	0.15	2.4	0.15	2.8	0.60	2.8	0.65	2.8	0.70	0.8	0.00
5	2.0	0.30	5.0	0.45	2.5	0.55	3.0	0.40	3.5	0.20	3.0	0.15	3.0	0.10	3.5	0.55	3.5	0.50	3.5	0.65	1.0	0.00
6	2.4	0.30	6.0	0.45	3.0	0.50	3.6	0.45	4.2	0.20	3.6	0.15	3.6	0.10	4.2	0.55	4.2	0.35	4.2	0.55	1.2	0.01
7	2.8	0.25	7.0	0.50	3.5	0.40	4.2	0.20	4.9	0.05	4.2	0.20	4.2	0.10	4.9	0.40	4.9	0.15	4.9	0.35	1.4	0.01
8	3.2	0.20	8.0	0.40	4.0	0.30	4.8	0.15	5.6	0.01	4.8	0.01	4.8	0.05	5.6	0.20	5.6	0.05	5.6	0.20	1.6	0.01
9	3.6	0.15	9.0	0.20	4.5	0.20	5.4	0.01	6.3	0.01	5.4	0.01	5.4	0.05	6.3	0.05	6.3	0.05	6.3	0.05	1.8	0.05
Right Bank	4.0	0.00	10.0	0.00	5.0	0.00	6.0	0.00	7.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	2.0	0.00
Feature Type <small>(riffle, run, or pool)</small>	pool		pool		pool		pool		pool		pool		pool		pool		pool		pool		riffle	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID # 937
 Site # 2

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	10:35	Site Location Description (e.g. road crossing):
Personnel: Larissa Brown and Gilisa Gould		Highway E
Current Weather Conditions: clear		Facility Name: Rainbow Acres Subdivision
Weather conditions for the past 10 days: 2.17 inches		Permit Number: MO0113271
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0450818	4302696		5.4	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0450779	4302936		7.3	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
75	downstream, T1	76	upstream, T1	77	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
78	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 937
Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel 40	% Sand 20	% Silt 20	% Mud/Clay 20	% Bedrock
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Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 937
Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>937</u> Site #: <u>2</u> Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0450818</u> UTM Y: <u>4302696</u> +/- <u>5.4</u> (meters) 11 UTM X: <u>0450779</u> UTM Y: <u>4302936</u> +/- <u>7.3</u> (meters) Average Stream Width: <u>8</u> (meters) Length of Survey Segment: <u>160</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Larissa Brown</u> and <u>Gilisa Gould</u>	Dissolved Oxygen Date: <u>10.25.07</u> Time: <u>10:35</u> Dissolved Oxygen: <u>10.8</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>15.5</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.8	0.25	0.7	0.15	0.7	0.20	0.1	0.10	0.2	0.30	0.1	0.05	0.4	0.01	0.4	0.01	0.4	0.01	0.5	0.01	0.3	0.15
2	1.6	0.65	1.4	0.35	1.4	0.25	0.2	0.15	0.4	0.25	0.2	0.00	0.8	0.05	0.8	0.05	0.8	0.05	1.0	0.10	0.6	0.25
3	2.4	0.70	2.1	0.60	2.1	0.30	0.3	0.20	0.6	0.10	0.3	0.05	1.2	0.15	1.2	0.05	1.2	0.10	1.5	0.15	0.9	0.25
4	3.2	0.65	2.8	0.60	2.8	0.35	0.4	0.20	0.8	0.15	0.4	0.05	1.6	0.20	1.6	0.10	1.6	0.10	2.0	0.25	1.2	0.20
5	4.0	0.50	3.5	0.50	3.5	0.40	0.5	0.15	1.0	0.20	0.5	0.05	2.0	0.25	2.0	0.05	2.0	0.20	2.5	0.40	1.5	0.15
6	4.8	0.45	4.2	0.50	4.2	0.55	0.6	0.10	1.2	0.15	0.6	0.05	2.4	0.15	2.4	0.00	2.4	0.20	3.0	0.45	1.8	0.10
7	5.6	0.45	4.9	0.55	4.9	0.70	0.7	0.05	1.4	0.15	0.7	0.05	2.8	0.35	2.8	0.05	2.8	0.20	3.5	0.30	2.1	0.00
8	6.4	0.50	5.6	0.60	5.6	0.50	0.8	0.05	1.6	0.10	0.8	0.01	3.2	0.05	3.2	0.01	3.2	0.15	4.0	0.15	2.4	0.10
9	7.2	0.20	6.3	0.30	6.3	0.15	0.9	0.01	1.8	0.05	0.9	0.01	3.6	0.05	3.6	0.01	3.6	0.05	4.5	0.05	2.7	0.05
Right Bank	8.0	0.00	7.0	0.00	7.0	0.00	1.0	0.00	2.0	0.00	1.0	0.00	4.0	0.00	4.0	0.00	4.0	0.00	5.0	0.00	3.0	0.00
Feature Type <small>(riffle, run, or pool)</small>	pool		pool		pool		riffle		pool		riffle		pool		pool		pool		pool		pool	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID # 937
 Site # 3

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	11:20	Site Location Description (e.g. road crossing):
Personnel: Larissa Brown and Gilisa Gould		CR 700
Current Weather Conditions: clear		Facility Name: Rainbow Acrea Subdivision
Weather conditions for the past 10 days: 2.17 inches		Permit Number: MO0113271
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, in Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0451137	4301228		3.3	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0451081	4301455		7.6	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
79	downstream, T1	80	upstream, T1	81	upstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
82	downstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 937
Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	10	70	10	10	

Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 937
Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>937</u> Site #: <u>3</u>															Dissolved Oxygen				
Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water)															Date: <u>10.25.07</u> Time: <u>11:20</u>				
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)															Dissolved Oxygen: <u>13.0</u> (mg/L)				
01 UTM X: <u>0451137</u> UTM Y: <u>4301228</u> +/- <u>3.3</u> (meters)															Dissolved Oxygen: _____ (% sat)				
11 UTM X: <u>0451081</u> UTM Y: <u>4301455</u> +/- <u>7.6</u> (meters)															Specific Cond: _____ (µS/cm)				
Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters)															Water Temperature: <u>17</u> (°C)				
(To determine Length of Reach) (20x average stream width)																			
Field Staff: <u>Larissa Brown</u> and <u>Gilisa Gould</u>																			

Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.10	0.8	0.35	0.1	0.20	0.1	0.05	0.8	0.01	0.6	0.05	0.8	0.05	0.2	0.01	0.7	0.05	0.7	0.10	0.9	0.20
2	1.4	0.40	1.6	0.50	0.2	0.30	0.2	0.10	1.6	0.20	1.2	0.10	1.6	0.30	0.4	0.01	1.4	0.05	1.4	0.25	1.8	0.25
3	2.1	0.60	2.4	0.65	0.3	0.20	0.3	0.05	2.4	0.20	1.8	0.30	2.4	0.45	0.6	0.00	2.1	0.00	2.1	0.20	2.7	0.40
4	2.8	1.00	3.2	0.70	0.4	0.10	0.4	0.20	3.2	0.20	2.4	0.40	3.2	0.40	0.8	0.00	2.8	0.00	2.8	0.00	3.6	0.40
5	3.5	1.00	4.0	0.70	0.5	0.05	0.5	0.20	4.0	0.20	3.0	0.45	4.0	0.60	1.0	0.00	3.5	0.00	3.5	0.15	4.5	0.35
6	4.2	1.00	4.8	0.70	0.6	0.05	0.6	0.10	4.8	0.25	3.6	0.40	4.8	0.50	1.2	0.05	4.2	0.01	4.2	0.25	5.4	0.35
7	4.9	1.00	5.6	0.50	0.7	0.01	0.7	0.05	5.6	0.20	4.2	0.25	5.6	0.50	1.4	0.05	4.9	0.05	4.9	0.20	6.3	0.40
8	5.6	1.00	6.4	0.20	0.8	0.01	0.8	0.05	6.4	0.20	4.8	0.10	6.4	0.30	1.6	0.10	5.6	0.05	5.6	0.10	7.2	0.30
9	6.3	1.00	7.2	0.05	0.9	0.01	0.9	0.01	7.2	0.10	5.4	0.10	7.2	0.10	1.8	0.05	6.3	0.05	6.3	0.05	8.1	0.10
Right Bank	7.0	0.00	8.0	0.00	1.0	0.00	1.0	0.00	8.0	0.00	6.0	0.00	8.0	0.00	2.0	0.00	7.0	0.00	7.0	0.00	9.0	0.00
Feature Type (riffle, run, or pool)	pool		pool		pool		pool		pool		pool		pool		pool		riffle		pool		pool	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID # 937
 Site # 4

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	12:00	Site Location Description (e.g. road crossing):
Personnel: Larissa Brown and Gilisa Gould		CR 600
Current Weather Conditions: clear		Facility Name: Rainbow Acres Subdivision
Weather conditions for the past 10 days: 2.17 inches		Permit Number: MO0113271
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:		Meters
	0450862	4299454			3.3
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:		Meters
	0450877	4299727			7.3

Photos:

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
83	downstream, T1	84	upstream, T1	85	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
86	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 937
Site # 4

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble 10	% Gravel 10	% Sand 30	% Silt	% Mud/Clay 50	% Bedrock
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Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 937
Site # 4

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa Gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>937</u> Site #: <u>4</u> Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0450862</u> UTM Y: <u>4299454</u> +/- <u>3.3</u> (meters) 11 UTM X: <u>0450877</u> UTM Y: <u>4299727</u> +/- <u>7.3</u> (meters) Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Larissa Brown</u> and <u>Gilisa Gould</u>	Dissolved Oxygen Date: <u>10.25.07</u> Time: <u>12:00</u> Dissolved Oxygen: <u>6.2</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>23.8</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.3	0.10	0.2	0.15	0.2	0.01	0.3	0.05	0.2	0.01	0.2	0.05	0.1	0.01	0.2	0.01	0.2	0.01	0.1	0.05	0.2	0.10
2	0.6	0.25	0.4	0.35	0.4	0.01	0.6	0.05	0.4	0.01	0.4	0.05	0.2	0.05	0.4	0.15	0.4	0.05	0.2	0.10	0.4	0.15
3	0.9	0.55	0.6	0.25	0.6	0.01	0.9	0.15	0.6	0.00	0.6	0.10	0.3	0.05	0.6	0.10	0.6	0.10	0.3	0.10	0.6	0.10
4	1.2	0.65	0.8	0.30	0.8	0.00	1.2	0.15	0.8	0.01	0.8	0.15	0.4	0.10	0.8	0.10	0.8	0.10	0.4	0.10	0.8	0.05
5	1.5	0.50	1.0	0.30	1.0	0.01	1.5	0.15	1.0	0.01	1.0	0.15	0.5	0.10	1.0	0.10	1.0	0.10	0.5	0.10	1.0	0.01
6	1.8	0.40	1.2	0.30	1.2	0.05	1.8	0.10	1.2	0.05	1.2	0.10	0.6	0.10	1.2	0.10	1.2	0.10	0.6	0.10	1.2	0.00
7	2.1	0.25	1.4	0.55	1.4	0.05	2.1	0.15	1.4	0.10	1.4	0.10	0.7	0.05	1.4	0.05	1.4	0.05	0.7	0.10	1.4	0.05
8	2.4	0.10	1.6	0.50	1.6	0.05	2.4	0.15	1.6	0.10	1.6	0.05	0.8	0.01	1.6	0.05	1.6	0.05	0.8	0.10	1.6	0.10
9	2.7	0.10	1.8	0.20	1.8	0.05	2.7	0.15	1.8	0.10	1.8	0.05	0.9	0.01	1.8	0.05	1.8	0.05	0.9	0.05	1.8	0.05
Right Bank	3.0	0.00	2.0	0.00	2.0	0.00	3.0	0.00	2.0	0.00	2.0	0.00	1.0	0.00	2.0	0.00	2.0	0.00	1.0	0.00	2.0	0.00
Feature Type <small>(riffle, run, or pool)</small>	pool		pool		riffle		pool		pool		pool		pool		pool		pool		pool		pool	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID # 937
 Site # 5

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07 12:45	Site Location Description (e.g. road crossing):
Personnel: Larissa Brown and Gilisa Gould	CR 500
Current Weather Conditions: clear	Facility Name: Rainbow Acres Subdivision
Weather conditions for the past 10 days: 2.17 inches	Permit Number: MO011327
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0452158	4297781		3.6	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0451972	4297929		5.7	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
87	downstream, T1	88	upstream, T1	89	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
90	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 937
Site # 5

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble 10	% Gravel 10	% Sand 20	% Silt	% Mud/Clay 60	% Bedrock
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Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 937
Site # 5

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>937</u> Site #: <u>5</u> Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0452158</u> UTM Y: <u>4297781</u> +/- <u>3.6</u> (meters) 11 UTM X: <u>0451979</u> UTM Y: <u>4297929</u> +/- <u>5.7</u> (meters) Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Larissa Brown</u> and <u>Gilisa Gould</u>	Dissolved Oxygen Date: <u>10.25.07</u> Time: <u>12:45</u> Dissolved Oxygen: <u>12.1</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>16.9</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.01	0.6	0.05	0.6	0.05	0.7	0.01	0.5	0.01	0.7	0.05	0.7	0.01	0.8	0.05	0.1	0.01	0.7	0.40	0.5	0.10
2	1.0	0.10	1.2	0.05	1.2	0.15	1.4	0.00	1.0	0.05	1.4	0.05	1.4	0.05	1.6	0.01	0.2	0.05	1.4	0.80	1.0	0.15
3	1.5	0.15	1.8	0.05	1.8	0.15	2.1	0.00	1.5	0.10	2.1	0.00	2.1	0.05	2.4	0.00	0.3	0.01	2.1	1.00	1.5	0.20
4	2.0	0.15	2.4	0.05	2.4	0.05	2.8	0.00	2.0	0.10	2.8	0.00	2.8	0.05	3.2	0.00	0.4	0.05	2.8	1.00	2.0	0.20
5	2.5	0.10	3.0	0.10	3.0	0.10	3.5	0.01	2.5	0.05	3.5	0.00	3.5	0.05	4.0	0.01	0.5	0.01	3.5	1.00	2.5	0.30
6	3.0	0.10	3.6	0.10	3.6	0.10	4.2	0.01	3.0	0.10	4.2	0.01	4.2	0.10	4.8	0.01	0.6	0.00	4.2	1.00	3.0	0.25
7	3.5	0.05	4.2	0.15	4.2	0.10	4.9	0.05	3.5	0.10	4.9	0.05	4.9	0.15	5.6	0.05	0.7	0.00	4.9	0.85	3.5	0.35
8	4.0	0.10	4.8	0.05	4.8	0.20	5.6	0.05	4.0	0.10	5.6	0.05	5.6	0.25	6.4	0.05	0.8	0.01	5.6	0.50	4.0	0.20
9	4.5	0.05	5.4	0.01	5.4	0.10	6.3	0.05	4.5	0.05	6.3	0.05	6.3	0.15	7.2	0.05	0.9	0.01	6.3	0.05	4.5	0.05
Right Bank	5.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	5.0	0.00	7.0	0.00	7.0	0.00	8.0	0.00	1.0	0.00	7.0	0.00	5.0	0.00
Feature Type <small>(riffle, run, or pool)</small>	pool		pool		pool		riffle		pool		pool		pool		pool		riffle		pool		pool	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID # 937
 Site # 6

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	13:45	Site Location Description (e.g. road crossing):
Personnel: Larissa Brown and Gilisa Gould		CR 310
Current Weather Conditions: clear		Facility Name: Rainbow Acres Subdivision
Weather conditions for the past 10 days: 2.17 inches		Permit Number: MO0113271
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0452630	4294601		5.4	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0452985	4294788		4.5	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
91	downstream, T1	92	upstream, T1	93	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
94	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 937
Site # 6

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: fence crosses stream				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel 20	% Sand 50	% Silt	% Mud/Clay 30	% Bedrock
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Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 937
Site # 6

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>937</u> Site #: <u>6</u> Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0452630</u> UTM Y: <u>4294601</u> +/- <u>5.4</u> (meters) 11 UTM X: <u>0452985</u> UTM Y: <u>4294788</u> +/- <u>4.5</u> (meters) Average Stream Width: <u>8</u> (meters) Length of Survey Segment: <u>160</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Larissa Brown and Gilisa Gould</u>	Dissolved Oxygen Date: <u>10.25.07</u> Time: <u>13:45</u> Dissolved Oxygen: <u>13.8</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>11.3</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.8	0.10	0.8	0.01	0.3	0.01	0.3	0.05	0.4	0.01	0.4	0.05	0.5	0.05	0.8	0.05	0.5	0.01	0.4	0.15	0.9	0.01
2	1.6	0.15	1.6	0.01	0.6	0.01	0.6	0.15	0.8	0.05	0.8	0.05	1.0	0.15	1.6	0.05	1.0	0.15	0.8	0.30	1.8	0.00
3	2.4	0.25	2.4	0.05	0.9	0.01	0.9	0.20	1.2	0.01	1.2	0.05	1.5	0.50	2.4	0.05	1.5	0.20	1.2	0.30	2.7	0.00
4	3.2	0.25	3.2	0.05	1.2	0.01	1.2	0.15	1.6	0.01	1.6	0.05	2.0	0.15	3.2	0.10	2.0	0.25	1.6	0.25	3.6	0.00
5	4.0	0.25	4.0	0.05	1.5	0.01	1.5	0.30	2.0	0.00	2.0	0.10	2.5	0.20	4.0	0.15	2.5	0.35	2.0	0.25	4.5	0.00
6	4.8	0.25	4.8	0.05	1.8	0.05	1.8	0.25	2.4	0.00	2.4	0.05	3.0	0.15	4.8	0.15	3.0	0.30	2.4	0.20	5.4	0.00
7	5.6	0.30	5.6	0.15	2.1	0.01	2.1	0.15	2.8	0.01	2.8	0.05	3.5	0.15	5.6	0.15	3.5	0.15	2.8	0.15	6.3	0.00
8	6.4	0.15	6.4	0.15	2.4	0.01	2.4	0.10	3.2	0.05	3.2	0.01	4.0	0.20	6.4	0.15	4.0	0.15	3.2	0.10	7.2	0.01
9	7.2	0.05	7.2	0.01	2.7	0.01	2.7	0.05	3.6	0.01	3.6	0.01	4.5	0.10	7.2	0.05	4.5	0.10	3.6	0.05	8.1	0.01
Right Bank	8.0	0.00	8.0	0.00	3.0	0.00	3.0	0.00	4.0	0.00	4.0	0.00	5.0	0.00	8.0	0.00	5.0	0.00	4.0	0.00	9.0	0.00
Feature Type (riffle, run, or pool)	pool		pool		riffle		pool		riffle		pool		pool		pool		pool		pool		pool	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID # 937
 Site # 7

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07 14:20	Site Location Description (e.g. road crossing):
Personnel: Larissa Brown and Gilisa Gould	LeMonte Rd.
Current Weather Conditions: clear	Facility Name: Rainbow Acres Subdivision
Weather conditions for the past 10 days: 2.17 inches	Permit Number: MO0113271
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0454936	4292689		6.7	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0454754	4292738		5.7	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
95	downstream, T1	96	upstream, T1	97	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
98	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 937
Site # 7

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel 30	% Sand 40	% Silt	% Mud/Clay 30	% Bedrock
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Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 937
Site # 7

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>937</u> Site #: <u>7</u> Estimated Channel Incision: <u>1.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0454936</u> UTM Y: <u>4292689</u> +/- <u>6.7</u> (meters) 11 UTM X: <u>0454754</u> UTM Y: <u>4292738</u> +/- <u>5.7</u> (meters) Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Larissa Brown and Gilisa Gould</u>	Dissolved Oxygen Date: <u>10.25.07</u> Time: <u>14:20</u> Dissolved Oxygen: <u>13.8</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>16</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6	0.05	0.5	0.01	0.5	0.05	0.6	0.05	0.6	0.05	0.6	0.01	0.6	0.01	0.8	0.05	0.7	0.01	0.6	0.05	0.5	0.01
2	1.2	0.20	1.0	0.05	1.0	0.20	1.2	0.10	1.2	0.05	1.2	0.10	1.2	0.01	1.6	0.15	1.4	0.05	1.2	0.01	1.0	0.05
3	1.8	0.25	1.5	0.10	1.5	0.30	1.8	0.10	1.8	0.10	1.8	0.20	1.8	0.01	2.4	0.15	2.1	0.05	1.8	0.01	1.5	0.05
4	2.4	0.20	2.0	0.15	2.0	0.30	2.4	0.15	2.4	0.15	2.4	0.20	2.4	0.00	3.2	0.15	2.8	0.01	2.4	0.10	2.0	0.10
5	3.0	0.20	2.5	0.20	2.5	0.25	3.0	0.15	3.0	0.20	3.0	0.30	3.0	0.00	4.0	0.10	3.5	0.01	3.0	0.10	2.5	0.05
6	3.6	0.20	3.0	0.20	3.0	0.20	3.6	0.15	3.6	0.25	3.6	0.35	3.6	0.00	4.8	0.05	4.2	0.00	3.6	0.10	3.0	0.05
7	4.2	0.15	3.5	0.15	3.5	0.15	4.2	0.15	4.2	0.20	4.2	0.30	4.2	0.01	5.6	0.05	4.9	0.01	4.2	0.10	3.5	0.01
8	4.8	0.05	4.0	0.10	4.0	0.15	4.8	0.05	4.8	0.20	4.8	0.25	4.8	0.01	6.4	0.01	5.6	0.01	4.8	0.05	4.0	0.01
9	5.4	0.05	4.5	0.05	4.5	0.10	5.4	0.05	5.4	0.10	5.4	0.25	5.4	0.01	7.2	0.01	6.3	0.01	5.4	0.01	4.5	0.01
Right Bank	6.0	0.00	5.0	0.00	5.0	0.00	6.0	0.00	6.0	0.00	6.0	0.00	6.0	0.00	8.0	0.00	7.0	0.00	6.0	0.00	5.0	0.00
Feature Type (riffle, run, or pool)	pool		pool		pool		pool		pool		pool		pool		pool		pool		pool		pool	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)
 Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)
 All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID# 0937 Walnut Creek



Site# 1 Photo ID# 71, Downstream T1



Site# 1 Photo ID# 72, Upstream, T1



Site# 1 Photo ID# 73, Downstream T 11



Site# 1 Photo ID# 74, Upstream, T 11

WBID# 0937 Walnut Creek



Site# 2 Photo ID# 75, Downstream T1



Site# 2 Photo ID# 76, Upstream, T1



Site# 2 Photo ID# 77, Downstream T 11



Site# 2 Photo ID# 78, Upstream, T 11

WBID# 0937 Walnut Creek



Site# 3 Photo ID# 79, Downstream T1



Site# 3 Photo ID# 80, Upstream, T1



Site# 3 Photo ID# 81, Downstream T 11



Site# 3 Photo ID# 82, Upstream, T 11

WBID# 0937 Walnut Creek



Site# 4 Photo ID# 83, Downstream T1



Site# 4 Photo ID# 84, Upstream, T1



Site# 4 Photo ID# 85, Downstream T 11



Site# 4 Photo ID# 86, Upstream, T 11

WBID# 0937 Walnut Creek



Site# 5 Photo ID# 87, Downstream T1



Site# 5 Photo ID# 88, Upstream, T1



Site# 5 Photo ID# 89, Downstream T 11



Site# 5 Photo ID# 90, Upstream, T 11

WBID# 0937 Walnut Creek



Site# 6 Photo ID# 91, Downstream T1



Site# 6 Photo ID# 92, Upstream, T1



Site# 6 Photo ID# 93, Downstream T 11



Site# 6 Photo ID# 94, Upstream, T 11

WBID# 0937 Walnut Creek



Site# 7 Photo ID# 95, Downstream T1



Site# 7 Photo ID# 96, Upstream, T1



Site# 7 Photo ID# 97, Downstream T 11



Site# 7 Photo ID# 98, Upstream, T 11

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet D – Recreational Use Interview

(must be completed for each interview)

I. Introduction

Stream Name and WBID: Walnut Creek 937

Date & Time (include AM or PM): 3/6/08 9:45 a.m.

Interviewed: ☐ In person ☒ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

Interviewee selected because (e.g., house next to stream; standing by stream, etc.) Mr. Christopher sent in comments saying he wades in above his waist in Walnut & Post Oak Creeks. Phoned him to follow-up.

Interviewer introduction to Interviewee: "My name is _____, I work for _____ (name of your employer) _____, and I am collecting information on how people use _____ (name of the stream) _____."

ASK:

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

☐ Yes ☐ No If yes, list contact information for the interviewee below:

Legal name: Warren T. Christopher

Current mailing address: 210 Grover St.
Warrensburg, MO

Daytime phone number: (660) 429-1143

E-mail address (optional): -

2.a.) Do you live in this area? ☒ Yes ☐ No

If yes, how many years? 67

2.b.) If you don't live in this area, are you still familiar with this stream? ☐ Yes ☐ No

If yes, how many years? _____

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) ☒ Yes ☐ No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

II. Personal Use?

1.) Have you or your family personally used the stream for recreation since November 28, 1975? ☒ Yes ☐ No

If yes, proceed to #3.

If no, proceed to, and complete #2.

2.a.) If no, list reasons stream not used. _____

b.) From here proceed to "III. Witnessed Use?".

3.) How do you use the stream?

Whole Body Contact Recreation (WBCR)

☐ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing

If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

Secondary Contact Recreation (SCR)

☐ Fishing ☐ Wading ☐ Boating ☐ Trapping ☒ Other: hunting for arrowheads & enjoying nature

If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? all times

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). all along stream segments. 4

4.e.) Which of these times and places (if any) did children wade or play? _____

III. Witnessed Use?

1.) Have you observed others using this stream for recreation since Nov. 28, 1975?

☐ Yes ☒ No

If yes, proceed to #2.

If no, proceed to, "IV. Anecdotal Use?"

2.) What kinds of uses have you witnessed?

Whole Body Contact Recreation (WBCR)

☐ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing

If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

WBID #: 937
Site # —

Name of Person Interviewed Christopher
Date of Interview 3/6/08

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

Secondary Contact Recreation (SCR)

☐ Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other:

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

2.e.) Which of these times and places (if any) did you specifically witness children wading or playing? _____

IV. Anecdotal Use?

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☒ Yes ☐ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

Whole Body Contact Recreation (WBCR)

☐ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

WBID # 937

Site # _____

Name of Person Interviewed ChristopherDate of Interview 3/6/08**Secondary Contact Recreation (SCR)**☒ Fishing ☐ Wading ☐ Boating ☒ Trapping ☒ Other: Hunting

If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). _____

2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? _____

V. Others to Contact?Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No

If yes, that person's contact info (name, address, phone, directions?) _____

If no, thank the individual for taking the time to talk to you and conclude the interview.

VI. Additional CommentsFrom the Interviewee: Does not believe stream is used for swimming.

From the Interviewer: _____

VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes ☒ No

If yes, how? (check all that apply):

☐ Pre-Assessment Meeting☐ Workshop☐ On-line training seminar☐ Other. If "Other," list: _____Interviewer's Signature: Anne PeeryInterviewer's Name, Printed: Anne PeeryEmployer (where applicable): Dept. of Natural ResourcesInterviewer's Phone No.: 573-526-1426 E-mail: anne.peery@dnr.mo.gov

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet D – Recreational Use Interview

(must be completed for each interview)

I. Introduction

Stream Name and WBID: Walnut Creek #937

Date & Time (include AM or PM): 3/4/08 9:45 a.m

Interviewed: ☐ In person ☒ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

Interviewee selected because (e.g., house next to stream; standing by stream, etc.) follow-up
Mr. Brenner
commented in 2005 that this creek was used for
recreational purposes, including swimming.

Interviewer introduction to Interviewee: "My name is _____, I work for _____ (name of your employer) _____, and I am collecting information on how people use _____ (name of the stream) _____."

ASK:

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

☐ Yes ☐ No If yes, list contact information for the interviewee below:

Legal name: William Brenner, Presiding Commissioner (County)

Current mailing address: Johnson County Courthouse, 300th Holden
Warrensburg, MO 64093

Daytime phone number: (660) 747-6161

E-mail address (optional): _____

2.a.) Do you live in this area? ☒ Yes ☐ No

If yes, how many years? 13

2.b.) If you don't live in this area, are you still familiar with this stream? ☐ Yes ☐ No

If yes, how many years? _____

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) ☒ Yes ☐ No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

II. Personal Use?

1.) Have you or your family personally used the stream for recreation since November 28, 1975? ☐ Yes ☒ No

If yes, proceed to #3.

If no, proceed to, and complete #2.

2.a.) If no, list reasons stream not used. See comments pg 4

b.) From here proceed to "III. Witnessed Use?".

3.) How do you use the stream?

Whole Body Contact Recreation (WBCR)

☐ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing

If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

Secondary Contact Recreation (SCR)

☐ Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: _____

If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

4.e.) Which of these times and places (if any) did children wade or play? _____

III. Witnessed Use?

1.) Have you observed others using this stream for recreation since Nov. 28, 1975?

☐ Yes ☒ No

If yes, proceed to #2.

If no, proceed to, "TV. Anecdotal Use?".

2.) What kinds of uses have you witnessed?

Whole Body Contact Recreation (WBCR)

☐ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing

If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

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2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

Secondary Contact Recreation (SCR)

☐ Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other:

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

2.e.) Which of these times and places (if any) did you specifically witness children wading or playing? _____

IV. Anecdotal Use?

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☒ Yes ☐ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

Whole Body Contact Recreation (WBCR)

☐ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

WBID # 937Name of Person Interviewed BrennerSite # -Date of Interview 3/4/08**Secondary Contact Recreation (SCR)**☒ Fishing ☐ Wading ☐ Boating ☒ Trapping ☐ Other: Hunting**If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:**

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)?

2.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol).

All Along, especially in "wetlands" towards Blackwater River (which Walnut Creek runs into).

2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing?

V. Others to Contact?Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No

If yes, that person's contact info (name, address, phone, directions?)

If no, thank the individual for taking the time to talk to you and conclude the interview.

VI. Additional CommentsFrom the Interviewee: He does not know of any swimming because it is very shallow. The other Walnut Creek (918) north of Warrensburg is shallower & people swim in other nearby, better creeks.
so people do not swim in it.

From the Interviewer:

VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes ☒ No

If yes, how? (check all that apply):

☐ Pre-Assessment Meeting☐ Workshop☐ On-line training seminar☐ Other. If "Other," list:Interviewer's Signature: Anne PeeryInterviewer's Name, Printed: Anne PeeryEmployer (where applicable): Dept. of Natural ResourcesInterviewer's Phone No.: (573) 526-1426 E-mail: anne.peery@dnr.mo.gov